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Remarks

Claims 3-32 were rejected under 35 U.S.C. §102(e) as being anticipated by Peake *et al.* (U.S.P.N. 6,728,289).

35 U.S.C. §102(e) – claims 3-32

Claims 3-32 were rejected under 35 U.S.C. §102(e) as being anticipated by Peake *et al.* (U.S.P.N. 6,728,289).

Peake was cited for disclosing a layer having a non-planar microstructure (102) (col. 5, lines 57-65). The Examiner suggested that the non-planar microstructure was equivalent to the non-planar surface taught by the Applicants.

A “non-planar microstructure” is defined to have a top surface that includes one or more regions which are curved in at least one direction. One example of a non-planar microstructure is a microlens. A “microlens” is a substantially circular lens having a diameter less than 1 millimeter. (‘289, col. 3, lines 25-35). These microlenses are concentrically symmetric to improve spatial mode performance (‘289, col. 8, lines 29-37). Specifically, Peake teaches microlenses that are compatible to coupling to *single mode fibers* (‘289, col. 6, lines 59-64). These structures enhance the **fundamental mode operation** of the VCSEL due to the increased cavity losses of the higher order spatial modes. This fundamental mode is selected as the lasing mode of the cavity (‘289, col. 8, lines 49-54). Nowhere does Peake suggest or teach introducing a light emission property that *enables higher order spatial modes*. In fact, Peake teaches away from the present invention as the fundamental mode is selected as the lasing mode of the cavity.

In distinct contrast to the prior art cited, Applicants introduce a non-planar interface to **enable higher order optical modes**. The lobes of high optical intensity that correspond to the spatial texturing (page 8, lines 9-19). Thus, the light emission property **enables higher order spatial modes**. Independent claims 3, 30, 31, and 32 now recite that the “light emission property enables higher order spatial modes.” No new matter is being added to this amendment. Dependent claims 4-29 are believed patentable based on the allowability of independent claim 3. The rejection under 35 U.S.C. 102(e) is believed to be overcome.

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Conclusion

If the Examiner has any further questions or would like to discuss this application in more detail, he is invited to call the applicants' agent at the telephone number given below. The applicants respectfully suggest that the claims presently in the application are distinct over the prior art and that the application is now in condition for allowance. Accordingly, the applicants solicit favorable action.

Respectfully submitted,
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